PATENT IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

Jonathan K. Tash

Serial No.: 09/709,004

Filing Date: November 8, 2000

Examiner: Unknown

Group Art Unit 2744

For:

METHOD AND APPARATUS FOR SCHEDULING BROADCAST INFORMATION

Docket: 1109.1102101

Assistant Commissioner for Patents

Washington, D.C. 20231

I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE UNITED STATES POSTAL SERVICE AS FIRST CLASS ADDRESSED TO: ASSISTANT

Dear Sirs:

INFORMATION DISCLOSURE STATEMENT

Pursuant to the obligations of candor and good faith imposed by 37 C.F.R 1 documents listed on the attached PTO-1449 are hereby disclosed.

No representation is intended to be made hereby that any of the cited references establishes, by itself or in combination with other information, a prima facie case of unpatentability of any claim of the present case.

Respectfully submitted,

Jonathan K

By his attor

I. Tufte, Reg. 100. 38

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Dated: February 8th, 2001

FORM PTO-1449 Atty. Docket No.: 1109.1102101 Applicant: Jonathan K. Tash Applicant: Jonathan K. Tash Filing Date Filing Date November 8, 2000 Applicant: November 8, 2000

(A)		NEG.	U.S.	PATENT DOCUMEN	ITS		
Examiner Initial			Date	Name	Class	Sub Class	Filing Date If Appropriate
	AA	5,115,436	05/19/1992	McAuley	371	37.1	
	AB	5,659,790	08/19/1997	Kim et al.	395	806	
	AC	5,715,262	02/03/1998	Gupta	371	37.1	
	AD	5,778,187	07/07/1998	Monteiro et al.	395	200	<u> </u>
	AE	5,793,747	08/11/1998	Kline	370	230	
1	AF	5,812,545	09/22/1998	Liebowitz et al.	370	337	
	AG	5,864,557	01/26/1999	Lyons	370	444	
	AH	5,870,412	02/09/1999	Schuster et al.	371	37.01	
	AI	5,926,459	07/20/1999	Lyles et al.	370	230	•—-
	AJ	5,930,248	07/27/1999	Langlet et al.	370	347	
	AK	5,974,583	10/26/1999	Joo	714	784	REC
	AL	5,983,005	11/09/1999	Monteiro et al.	395	200.61	$O - \Pi$
	AM	6,000,053	12/07/1999	Levine et al.	714	766	NE 2
	AN	6,002,687	12/14/1999	Magee et al.	370	394	ED 2001
	AO	6,031,875	02/29/2000	Im	375	262	VED 6 2001 HAILROOM
	AP	6,041,431	03/21/2000	Goldstein	714	784	
	AQ	6,047,395	04/04/2000	Zook	714	756	

FOREIGN PATENT DOCUMENTS Document No. Date Country Class Sub Translation Yes No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Brad Cain et al., "Generic Multicast Transport Services: Router Support for Multicast Applications", CMPSCI Technical Report TR 99-74, October 1999, 15 pages.
AS	Dan Rubenstein et al., "A Centralized, Tree-Based Approach to Network Repair Service for Multicast Streaming Media", AT&T Technical Memorandum TM HA1720000-991129-03,

		November 1999, 20 pages.
	AT	Dan Rubenstein et al., "Improving Reliable Multicast Using Active parity Encoding Services (APES)", Technical Report 98-79, University of Massachusetts at Amberst, Department of Computer Science, July 1998, 22 pages.
	AU	Dan Rubenstein et al., "Real-Time Reliable Multicast Using Proactive Forward Error Correction", Computer Science Department, University of Massachusetts at Amherst, dated prior to November 8, 2000, 15 pages.
	AV	Dan Rubenstein et al., "Real-Time Reliable Multicast Using Proactive Forward Error Correction (FEC), University of Massachusetts at Amherst, dated prior to November 8, 2000, 14 slides.
	AW	Dan Rubenstein et al., "The Impact of Multicast Layering on Network Fairness", Technical Report 99-08, Department of Computer Science, February 1999, 27 pages.
	AX	Dan Rubenstein et al., "Improving Reliable Multicast Using Active Parity Encoding Serivces (APES)", University of Massachusetts at Amherst, dated prior to November 8, 2000, 14 slides.
	AY	Dan Rubenstein, "Increasing the Functionality and Availability of Reed-Solomon FEC Codes: a Performance Study", Technical Report 98-31, Department of Computer Science, August 1998, 18 pages.
	AZ	Johannes Blomer et al., "An XOR-Based Erasure-Resilient Coding Scheme", dated prior to November 8, 2000, 19 pages.
 	BA	John W. Byers et al., "A Digital Fountain Approach to Reliable Distribution of Bulk Data", TR-98-013, dated prior to November 8, 2000, 23 pages.
:	BB	Jorg Nonnenmacher et al., "Parity-Based Loss Recovery for Reliable Multicast Transmission", <u>Technical Report 97-17</u> , Department of Computer Science, University of Massachusetts, March 1997, 21 pages.
	BC	Lixin Gao et al., "Supplying Instantaneous Video-On-Demand Services Using Controlled Multicast", dated prior to November 8, 2000, 21 pages.
	BD	Luigi Rizzo et al., "A Reliable Multicast Data Distribution Protocol Based on Software FEC Techniques", dated prior to November 8, 2000, 10 pages.
-	BE	Luigi Rizzo, "Effective Erasure Codes for Reliable Computer Communication Protocols", dated prior to November 8, 2000, 13 pages.
	BF	Luigi Rizzo, "On the feasibility of Software FEC", available at http://www.iet.unipi.it/~luigi/softfec.ps , dated prior to November 8, 2000, 16 pages.
	BG	Maya Yajnik et al., "Measurement and Modelling of the Temporal Dependence in Packet Loss", UMASS COMPSCI Technical Report #98-78, dated prior to November 8, 2000, 22 pages.
	ВН	Michael G. Luby et al., "Analysis of Random Processes Via An-Or Tree Evaluation", TR-97-042 dated prior to November 8, 2000, 16 pages.
	BI	Michael Luby et al., "Practical Loss-Resilent Codes", dated prior to November 8, 2000, 20 pages.
•	ВЈ	Sneha Kumar Kasera et al., "A Comparison of Server-Based and Receiver-Based Local Recovery Approaches for Scalable Reliable Multicast", CMPSCI Technical Report TR 97-69, December 1997.
*	BK	Subhabrata Sen et al., "Frame-based Periodic Broadcast and Fundamental Resource Tradeoffs", Technical Report 99-78 Department of Computer Science, dated prior to November 8, 2000, 23 pages.
	BL	Subhabrata Sen et al., "Optimal Patching Schemes for Efficient Multimedia Streaming", UMASS CMPSCI Technical Report 99-22, dated prior to November 8, 2000, 16 pages.

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609, draw the through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.





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For: METHOD AND APPARATUS FOR SCHEDULING BROADCAST INFORMATION

Docket: 1109.1102101

TRANSMITTAL SHEET

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

CERTIFICATE UNDER 37 C.F.R. 1.8: I hereby certify that this correspondence is being deposited with the United States Postal Service on the date shown below with sufficient postage as first class mail in an envelope addressed to the: Assistant Commissioner for Patents, Washington, D.C. 20231, on

his ______day of February, 200

Brian N. Tufte

We are transmitting herewith the attached:

[] Amendment

[] No additional fee required

The fee has been calculated as shown:

	<u> </u>						
CLAIMS AS AMENDED							
	(3)	(4)	(5)	SMALL ENTITY		OTHER	
	REMAINING CLAIMS	HIGHEST PAID	EXTRA	RATE	ADD'L FEE	RATE	ADD'L FEE
TOTAL CLAIMS	-	=		x9=	\$	X18=	\$
INDEPEN- DENT CLAIMS	-	=		X40=	\$	X80=	\$
() FIRST MULTIPLE DEPENDENT CLAIM				+130=	\$	+260=	
TOTAL				\$		\$	

[]	A check in the amount of \$ is enclosed.
[]	Small entity status of this application under 37 C.F.R. 1.9 and 1.27 has been established by verified statement previously submitted.
[X]	Other: <u>Information Disclosure Statement form PTO-1449 and cited references.</u>
[X]	Please charge any deficiencies or credit any overpayment in the enclosed fees to Deposit Account No. 50-0413. By: Brian N. Tufte
	Reg. No. <u>38,638</u>

Brian N. Tufte CROMPTON, SEAGER & TUFTE, LLC 331 Second Avenue South Suite 895 Minneapolis, Minnesota 55401-2246

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